

## Somaiya Vidyavihar University

<b>Name:</b> Ashwini Dalvi		<b>E-mail:</b> ashwinidalvi@somaiya.edu	
<b>Contact No:</b> 9833109041			
Department/Section: Department of Information Technology			
College: K J Somaiya College of Engineering			
DOJ Somaiya: 1-12-2006	Career Experience: 16 Yrs	Industry Experience: __0_Yrs	Teaching Experience: _16_Yrs
Present Academic Designation: Assistant Professor		Present Administrative Designation: Honor Program Coordinator	

Area of research/specialization and Courses Delivered
<p><b>Research Areas</b></p> <ol style="list-style-type: none"> <li>1. Information Security</li> <li>2. Artificial Intelligence</li> <li>3. Machine Learning</li> <li>4. Application Development</li> <li>5. Internet of Things</li> </ol> <p><b>Courses Delivered</b></p> <ol style="list-style-type: none"> <li>1. UI Programming</li> <li>2. Application and Web Security</li> <li>3. Vulnerability Analysis and Penetration testing</li> <li>4. Advanced Offensive Security</li> <li>5. Web Development</li> <li>6. Internet of Things</li> </ol>

Recognition as a teacher by any University	UG: NA	PG: NA	Ph.D : NA
Details of Recognitions: NA			

Education					
Examination	Name of the Degree	University	Institute/College	Year	CPI/SPI/ %Marks
Ph.D (Pursuing)	Computer Engineering	Mumbai University	Veermata Jijabai Technological Institute (VJTI)	---	---
PG	Computer Engineering	Mumbai University	Veermata Jijabai Technological Institute (VJTI)	2010	9.37 (CPI)
UG	Electronics and Telecommunication	Mumbai University	S.H.Jondhale College of Engineering	2004	64 %
Diploma	Video Engineering	DTE, Maharashtra	St. Xavier's Technological Institute	2001	89%

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<b>Research Accomplishments and Projects</b>		
No of students pursuing Ph.D as on date:		No of students completed Ph.D as on date:
No of students completed PG Thesis as on date: 06		No of groups completed UG projects as on date: 30+
Publications Total: 40+	Number of Peer review Journal papers: 14	Number of Conference papers: 22+
Details of Publications:		
International Journals		
<ol style="list-style-type: none"> <li>1. Gokhale, Sheetal, Irfan Siddavatam, Ashwini Dalvi, Mohammed Shaikh, and Suchitra Patil. "Formal modelling and verification of high interactive honeypot using coloured Petri nets." International Journal of Critical Computer-Based Systems 10, no. 3 (2022): 227-247. Inderscience Publication</li> <li>2. Sheetal Gokhale, Ashwini Dalvi, Irfan Siddavatam, "Industrial Control Systems Honeypot: A Formal Analysis of Conpot", International Journal of Computer Network and Information Security (IJCNIS), Vol.12, No.6, pp.44-56, 2020. DOI: 10.5815/ijcnis.2020.06.04,</li> <li>3. Siddavatam, Irfan, Ashwini Dalvi, Dipti Pawade, Akshay Bhatt, Jyeshtha Vartak, and Arnav Gupta. "A Novel Approach for Video Inpainting Using Autoencoders." International Journal of Information Engineering &amp; Electronic Business 13, no. 6 (2021).</li> <li>4. Dipti Pawade, Ashwini Dalvi, Dr. Irfan Siddavatam, Myron Carvalho, Prajwal Kotian, Hima George, "Cuisine Detection Using the Convolutional Neural Network" International Journal of Education and Management Engineering, IJEME Vol. 10, No. 3, Jun. 2020</li> <li>5. Irfan Siddavatam, Ashwini Dalvi, Dipen Gupta, Zaid Farooqui, Mihir Chouhan, "Multi Genre Music Classification and Conversion System", International Journal of Information Engineering and Electronic Business, 2020, 1, 30-36, Published Online February 2020 in MECS Press, DOI: 10.5815/ijieeb.2020.01.04</li> <li>6. Omkar Ghaisas, Irfan Siddavatam, Ashwini Dalvi, Faruk Kazi, "Simulation of Anonymity Network Model", International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-8, Issue-7, May 2019.</li> <li>7. Ashwini Dalvi, Dhruv Gada, Irfan Siddavatam, "Extended Aid to Alzheimer and Dementia Patients using Novel Wearable Technology", International Journal of Computer Applications (IJCA), Volume 182 – No. 23, October 2018, ISSN- 0975 -8887</li> <li>8. Tank, Darshan, and Ashwini Dalvi. "A Novel Approach to Prevent Session Hijacking Attack." International Journal of Computer Applications 181, no. 14 (2018): 28-30</li> <li>9. Ashwini Dalvi, "An Integrative Trust Model in Evaluation Process: An Innovative Approach", Online Journal of Engineering Education Transformations (JEET), the official Journal of IUCEE, January 2017</li> </ol>		

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10. Kaushal Meher, Ashwini Dalvi, "Smart ATM- Reactive Measures against Physical Threats", International Journal of Latest Trends in Engineering and Technology (IJLTET), Volume 7, Issue 1, May 2016, ISSN- 2278-621X
11. Ashwini Dalvi, Pooja Sankhe, Tejaswini Dhaygude, Archana Kamble, "Contact Management Using QR Code", International Journal of Modern Trends in Engineering and Research, IJMTER, July 2015
12. Ashwini Dalvi, Dhvani Shah, Rujul Desai, Shraddha Vora, Vaibhav Tailor, " The Prophecy- Prototype of Predication modelling Tool", Volume 3, Special Issue 1, February 2014, International Journal of Innovative Research in Science, Engineering, and Technology (IJIREST)
13. Ashwini Dalvi, Pamukumar Swamy, B. B. Meshram, "DCF Improvement for Satisfactory Throughput of 802.11 WLAN", Vol. 3 No. 7 July 2011, International Journal on Computer Science and Engineering (IJCSE)
14. Ashwini Dalvi, Pamukumar Swamy, B. B. Meshram, "Routing Protocols for Cognitive Radio Ad-Hoc Network", International Journal of Computer Network and Security (IJCNS) Vol1. No.4 Oct-Dec 2010

### Conferences

1. Dalvi, Ashwini, Swapneel Paranjpe, Riddhi Amale, Sarvesh Kurumkar, Faruk Kazi, and S. G. Bhirud. "SpyDark: Surface and Dark Web Crawler." In 2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC), pp. 45-49. IEEE, 2021.
2. Dalvi, Ashwini, Lukesh Ankamwar, Omkar Sargar, Faruk Kazi, and S. G. Bhirud. "From Hidden Wiki 2020 to Hidden Wiki 2021: What Dark Web Researchers Comprehend with Tor Directory Services?." In 2021 5th International Conference on Information Systems and Computer Networks (ISCON), pp. 1-4. IEEE, 2021.
3. Dalvi, Ashwini, Samata Salve, Gauri Zape, Faruk Kazi, and S. G. Bhirud. "Security of Cyber-Physical Systems Through the Lenses of the Dark Web." In Proceedings of International Conference on Intelligent Cyber-Physical Systems, pp. 39-50. Springer, Singapore, 2022.
4. Dalvi, Ashwini, Irfan Siddavatam, Apoorva Jain, Smit Moradiya, Faruk Kazi, and S. G. Bhirud. "ELEMENT: Text Extraction for the Dark Web." In Advanced Computing and Intelligent Technologies, pp. 537-551. Springer, Singapore, 2022.
5. Dalvi, Ashwini, Irfan Siddavatam, Viraj Thakkar, Apoorva Jain, Faruk Kazi, and Sunil Bhirud. "Link Harvesting on the Dark Web." In 2021 IEEE Bombay Section Signature Conference (IBSSC), pp. 1-5. IEEE, 2021.

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6. Dalvi, Ashwini, Irfan Siddavatam, Abhishek Patel, Aditya Panchal, Faruk Kazi, and Sunil Bhirud. "DBias: Predicting attribute effectiveness using biased databases." In 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON), pp. 1-8. IEEE, 2021.
7. Dalvi, Ashwini, Aditya Ambekar, Faruk Kazi, and S. G. Bhirud. "BM25 Algorithm Driven Search Tool for Linking Exploits to Vulnerabilities." In 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON), pp. 1-5. IEEE, 2021.
8. Ashwini Dalvi, Apoorva Jain, Smit Moradiya, Riddisha Nirmal, Jay Sanghavi and Irfan Siddavatam, "Securing Neural Networks Using Homomorphic Encryption", accepted in Scopus indexed IEEE 2021 The International Conference for Intelligent Technologies (CONIT 2021), Hubballi, Karnataka, India on 25th -27th June 2021
9. Irfan Siddavatam, Ashwini Dalvi, Viraj Thakkar, Aditya Vedpathak, Smit Moradiya, Apoorva Jain, "Explainability using Decision trees and Monte Carlo simulations", 4th International Conference on Advances in Science and Technology (ICAST-2021), KJSIEIT, Sion, Mumbai, May 7th and 8th, 2021. Paper accessible on SSRN- Elsevier's online portal for ICAST-2021.
10. Ashwini Dalvi, Irfan Siddavatam, Viraj Thakkar, Aditya Vedpathak and Abhishek Patel, "Recognizing Child Unsafe Apps through User Reviews on the Google Play store", ICACIT 2021 (2021 International Conference on Advanced Computing and Intelligent Technologies), March 20-21, 2021, Jointly organized by Galgotias University, India and Department Of Information Engineering and Mathematics Università Di Siena, Italy, Publication Partner Springer Nature Singapore
11. Mohammed Saleh Shaikh, Irfan Siddavatam, Ashwini Dalvi, Aditya Panchal, Sheetal Gokhale, "Malicious Privacy Invasive Android Application Detection using Machine Learning based Permission Analysis Technique", published in 3rd Springer International Conference on Soft Computing and Signal Processing (ICSCSP – 2020), 22 August 2020, Malla Reddy College of Engineering & Technology, Hyderabad, India
12. Siddharth Rai, Hemangi Taraviya, Dipti Pawade, Ashwini Dalvi, Irfan Siddavatam, "Save Here: Emergency Response Application", 5th International Conference on Recent Trends in Big Data and IoT, 23-24 July 2020, St. Joseph's Institute of Technology, Chennai, India
13. Aliasgar Haji, Riya Saraf, Dipti Pawade, Ashwini Dalvi, Irfan Siddavatam, "Human Body part detection and External Injury Prediction Using Convolutional Neural Network", 5th International Conference on Recent Trends in Big Data and IoT, 23-24 July 2020, St. Joseph's Institute of Technology, Chennai, India

14. Myron Carvalho, Prajwal Kotian, Hima George, Dipti Pawade, Ashwini Dalvi, Irfan Siddavatam “Implementation of Smart Diet Assistance System” 8th International Conference on Recent Trends in Computing (ICRTC 2020), Department of Computer Science Engineering, SRM Institute of Science and Technology Delhi-NCR Campus, Ghaziabad, 3-4 July 2020, Proceedings in Springer Lecture Notes in Networks and Systems
15. Shivani Thakkar, Ashwini Dalvi, Irfan Siddavatam, Faruk Kazi, “Applicability of Blockchain for Synchronphasor Network”, International Conference on “Advances in Science and Technology” (ICAST -2019), Mumbai, 8th-9th April 2019. Conference proceedings published at SSRN-Elsevier Online Conference Publication Portal.
16. Irfan Siddavatam, Ashwini Dalvi, Shivam Pathak, Kshitiz Shrivastav, “Hierarchical Distributed Ledger for IoT using Ethereum Blockchain”, accepted in IEEE Sponsored 2019 5th International Conference for Convergence in Technology, Pune, India, 29th -31st March 2019
17. Shivani Thakkar, Ashwini Dalvi, Irfan Siddavatam, Faruk Kazi, “Blockchain as a Solution for Secure Synchronphasor Communication”, IEEE International Conference on Electrical, Communication, Electronics, Instrumentation and Computing (IEEE- ICECEIC), 30th & 31st January 2019
18. Ashwini Dalvi, Irfan Siddavatam, “SnoopMe Interactive Task Scheduler Mobile Application for Students”, 3rd Biennial International Conference on Nascent Technologies in Engineering, 4-5 January 2019, Fr. C. Rodrigues Institute of Technology, Vashi, Mumbai
19. Irfan Siddavatam, Ashwini Dalvi, Dipen Gupta, Mihir Chouhan, Zaid Farooqui, “Extending Role of AI From Music Genre Classification to Music Genre Conversion”, International Conference on New Trends in Engineering & Technology (ICNTET), IEEE Madras Section, 7-8 September 2018, Chennai, Tamil Nadu
20. Ashwini Dalvi, Irfan Siddavatam, “Blockchain for Securing IoT Application: Feasibility and Challenges”, IEEE International Conference on Electrical, Electronics, Computers, Communication, Mechanical and Computing (IEEE- EECCMC), 28th & 29th January 2018
21. Ashwini Dalvi, Irfan Siddavatam, Nishigandha Dandekar, Aniket Patil, “3D Holographic Projections using Prism and Hand Gesture Recognition”, International Conference on Advanced Research in Computer Science Engineering & Technology (ICARCSET 2015), Proceedings published in ACM Digital Library

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22. Ashwini Dalvi, Irfan Siddavatam, Nishigandha Dandekar, Aniket Patil, "Prism based Interactive 3D Holographic Projection", International Conference on Futuristic Trends on Computational Analysis

### Books/Book Chapters

1. Dalvi, A., Thakkar V., Moradiya S., Vedpathak., Kazi F., & Bhirud S.G., Chapter "Automatic web form classification and filling on the surface and dark web" accepted in the edited book "Robotic Process Automation – An Intelligent Business Computational System". Publisher - Wiley Indexed by Scopus and offered to Web of Science.
2. Dalvi, A., Bhoir S., Kazi F., & Bhirud S.G., Chapter "Dark Web Content Classification using Quantum Encoding" accepted in the edited book "Methodologies and Application of Quantum Computing in Cyber Terrorism and Security Framework". Publisher - Wiley Indexed by Scopus and offered to Web of Science.
3. Dalvi, A., Raut, S. M., Joshi, N., Bhuta, D. R., Nalla, S., & Bhirud, S. G. (2022). Content Labelling of Hidden Services With Keyword Extraction Using the Graph Decomposition Method. In Using Computational Intelligence for the Dark Web and Illicit Behavior Detection (pp. 181-205). IGI Global.
4. Dalvi, A., Shah, K., Jambhalkar, U., Pawar, V., Bhoir, D., & Bhirud, S. G. (2022). Structure Analysis of Tor Hidden Services Using DOM-Inspired Graphs. In Using Computational Intelligence for the Dark Web and Illicit Behavior Detection (pp. 33-55). IGI Global.
5. Siddavatam I., Dalvi A., Patel A., Panchal A., Vedpathak A., Thakkar V., "ML Enabled Informed Intervention for Crowdsourcing based Optimization of Medical Resources", published in "Handbook of Research on Applied Intelligence for Health and Clinical Informatics", IGI Publication, September 2021

### Copyrights

1. MALANG (Malware Analysis Generator)  
Registration Number: SW-15725/2022  
Description: Any apps from Google play store can be scanned for malware analysis using MALANG web application. The user has to enter only the name of the app in the search bar and the top 10 apps related to the name will be displayed in the dropdown list.

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No of Research / consultancy / projects completed: 06	No of Research / consultancy / projects on-going:01	No of Research / consultancy / projects on applied as on date: --
<b>Details of Research / consultancy / projects:</b>		
<b>Completed</b>		
1. Landscape Analysis for Online Child Trafficking and Online Child Sexual Exploitation (AY 2019-2020) Contributing Organization: K.J.Somaiya College of Engineering (KJSCE), Cyber Peace Foundation (CPF) Project Funded by: Children’s Investment Fund and Foundation (CIFF) Project Fund : 65 Lakhs		
2. COView: A Covid-19 Patient Management System for KEM Hospital (AY 2020-2021) Associated Organization: King Edward Memorial Hospital (KEM)		
3. KEMH Covid-19 Patient LineList (Android Application Development) (AY 2020-2021) Associated Organization: King Edward Memorial Hospital (KEM)		
4. Deep Learning-Based Grain Quality Assessor (PoC Completed in AY 2018-2019) Associated Organization: National Bulk Handling Corporation Pvt. Ltd. (NBHC), Mumbai		
5. HRMS Josh A Human Resource Management System for Territorial Army (Kumaon Regiment) (AY 2018-2019) Contributing Organization: K.J.Somaiya College of Engineering (KJSCE), Cyber Peace Foundation (CPF)		
6. Black Button: Pollution Data provider (AY 2016-2017) Contributing Organization: University of Mumbai and K.J.Somaiya College of Engineering (KJSCE)		
<b>On-going</b>		
1. Received research grant for Sustainability measurement of Blockchain Laboratory infrastructure Duration: 3 Years Grant Approval: 1 Cr Grant Utilization in 1st year: 24 Lakhs		

## Somaiya Vidyavihar University

### FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered

#### Attended

1. Attended Knowledge Forum Session on Emerging Technologies: IoT, CSI Rajkot, April 2021
2. Attended 3 days online workshop on Emotional intelligence for personal and professional success, KLE Dr. M.S. Sheshgiri College of Engineering and Technology, Karnataka, March 2021
3. Attended ISTE approved one week Short Term Training Program on “Data Science and Big data Analytics”, at Fr. C. Rodrigues Institute of Technology, Vashi, December 19- December 24, 2016
4. Attended ISTE approved one week Short Term Training Program on “SMAC”, at K.J.S.C.E., Mumbai December 05- December 09, 2016
5. Attended Two days Training Program on “Frameworks”, at K.J.S.C.E., Mumbai, March 2016
6. Attended Faculty Development Program, organized by iGATE, Mumbai, May 25- May 29, 2015.
7. Attended Four days Training Program on “NBA’s Outcome Based Accreditation”, at K.J.S.C.E., Mumbai, June 2014
8. Attended ISTE approved one week Short Term Training Program on ‘Tools and Techniques for Effective Technical Writing’, at K.J.S.C.E., Mumbai May 13- May 17, 2013.
9. Attended 1 Day seminar on Ethical Hacking and Network Security, Mumbai, January 12, 2013.
10. Attended Two days Training Program on “Aakash For Education”, at K.J.S.C.E., Mumbai, November 2012
11. Attended International Conference, organized by Thakur College of Engineering, Mumbai, February 2011
12. Attended National Conference organized by VJTI, Mumbai, December 2010.
13. Attended Two days STTP on “Workshop On wired and Wireless Devices” D Y Patil College, Pune 2008
14. Attended ISTE approved Short Term Training Program on ‘Wireless Communication and Mobile Computing’, at Don Bosco Institute of Technology, Mumbai, 2008
15. Attended ISTE approved Two week Short Term Training Program on ‘Image Processing and Multimedia: Technologies and Applications’, at K.J.S.C.E., Mumbai, 2007

#### Organized

1. Organized Seminar in association with TCS on "Post Covid Challenges: What industry expects from Academia?", January 2021
2. Expert lecture on “Machine Learning Big Picture View” by Mr. Ajinkya Kolhe, Google, Machine Learning instructor, March 2019
3. Expert lecture on “Entrepreneurial Workshop – Start-up” by Mihir Shah, Founder, TECHNOPHILE RENTAL February 2019
4. Organized Global Contribution Sprint in collaboration with ERPNext Foundation and K.J. Somaiya College of Engineering, October 2018
5. Expert session on “Project Opportunities with Open Source Platform”, by Mr. Rushabh Mehta, Experts from India's leading open source ERP platform "ERPNext", March 2018



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6. Organizing committee member for ISTE approved STTP on “Internet of Things” in K. J. Somaiya College of Engineering, Vidyavihar, Mumbai, January 4 - January 8, 2016.
7. Organizing committee member for National Conference on “Emerging trends in computers, communication and Information Technology”, at K.J.S.C.E., Mumbai, March 20-21, 2009.

### Delivered

1. Delivered a lecture in ISTE approved STTP on “Internet of Things: A Multidisciplinary Approach for Future Innovations” in K. J. Somaiya College of Engineering, Vidyavihar, Mumbai, January 5, 2023.
2. Deliver session on IoT Work Environmnet”, UGC HRDC organized Refresher’s Course on Robotics and IoT at Mulund College of Commerce, sponsored by RUSA, February 2021
3. Delivered session on AI for Security, Network Intelligence India Pvt. Limited, Mumbai, January 2020
4. Delivered a lecture in ISTE approved STTP on “Industrial IoT System Design from Sensing to Mitigation” in K. J. Somaiya College of Engineering, Vidyavihar, Mumbai, June 14, 2019.
5. Delivered a lecture on “Security in IoT” , in ISTE approved STTP on “ Digital Security” in K. J. Somaiya College of Engineering, Vidyavihar, Mumbai, June 30, 2016.
6. Delivered a lecture on “Research Trends in IoT”, in ISTE approved STTP on “Internet of Things” in K. J. Somaiya College of Engineering, Vidyavihar, Mumbai, January 8, 2016.

### Notable Key Scholastic Achievements

- |    |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | The "SpyDark" crawler won 3rd Prize in Darkathon 2022, conducted by Narcotics Control Bureau (NCB) Darkathon-2022 aimed to find solutions to counter drug trafficking on the darknet worldwide. Darkathon received around 250 entries, out of which 15 entries were selected for Grand Finale at NCB headquarters, Delhi. As a result, SpyDark secured a third place among fifteen entries at the grand finale in Darkathon 2022. |
| 2. | “Best Teacher” award in the Higher education category of K J Somaiya award on the 61st Foundation day celebrated in 2019                                                                                                                                                                                                                                                                                                          |

### Notable Positions and Responsibility

- |    |                                                        |
|----|--------------------------------------------------------|
| 1. | Former Member of Institute level Examination Committee |
| 2. | Department Level UG Project Coordinator                |

**Date: 10 /02 / 2023**

**Signature of Faculty Member**